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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/449,706	11/24/1999	TAKAFUMI MIZUNO	35.C14035	6598

5514 7590 04/22/2003

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EXAMINER

LUDWIG, MATTHEW J

ART UNIT	PAPER NUMBER
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2178

DATE MAILED: 04/22/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/449,706

Applicant(s)

MIZUNO, TAKAFUMI

Examiner

Matthew J. Ludwig

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 24 November 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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### DETAILED ACTION

1. This action is responsive to communications: application filed 11/24/99. Foreign priority date of 11/26/98 has been verified.
2. Claims 1-23 are pending in the case. Claims 1, 12, and 23 are independent claims.

#### ***Claim Rejections - 35 USC § 112***

3. Claim 9 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The redundancy-removing step of '*obtaining similarity degrees concerning agreement degrees of the physical structure*' is not described in the specification.

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shafer et al., U.S. Patent Number 5,583,762 filed (8/22/94) in view of Messerly et al., U.S. Patent Number 6,161,084 filed (3/7/97).

**In reference to independent claim 1, Shafer discloses:**

The reduction acquires and operates discretely upon each grammar element of the hierarchical tree structure. Then a determination is made as to whether each acquired grammar

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element is combined with a rule of a given form of tree structure. See column 3, lines 30-40. The reference demonstrates a *physical structure judging step* when it states the '*determination is made as to whether each such acquired grammar element is combined with a rule.*' The reference further discloses a reduced grammar or DTD evolved essentially as an automatic process from the originally produced sample document grouping. This process demonstrates the DTD generation method based upon the evaluation of SGML elements. Shafer makes reference to a '*reduction based upon the semantics of SGML wherein, when the text is present at the same level of structure, then the structure probably is errant*'. The reference does not explicitly disclose judging a semantic structure of each document element. However, Messerly discloses a method of parsing both indexed and query text to perform lexical, syntactic, and semantic analysis of this input text. See column 2, lines 58-65. The utilization of semantic analysis to transform input text regions would have provided Shafer the benefit of analyzing elements within a document type definition generating process.

**In reference to dependent claim 2,** Shafer discloses:

The program has looked to determine whether there is text around the tag that was found, and that text is marked PCDATA. The program thus knows where the text is and knows where the tags are. The reference does not explicitly disclose judging the physical structure of the document element based on an indentation or a blank line; however, the generation and reduction methods of Shafer demonstrate the analyzing the tags as well as text within the tags. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included an indentation as part of the analysis of text because it would have extended the benefit of the tag extraction process and developed tag list.

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**In reference to dependent claim 3, Shafer discloses:**

The program has looked to determine whether there is text around the tag that was found, and that text is marked PCDATA. The program thus knows where the text is and knows where the tags are. The reference does not explicitly disclose judging the physical structure of the document element based on an indentation or a blank line; however, the generation and reduction methods of Shafer demonstrate the analyzing the tags as well as text within the tags. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included an indentation as part of the analysis of text because it would have extended the benefit of the tag extraction process and developed tag list.

**In reference to dependent claim 4, Shafer discloses:**

The program has looked to determine whether there is text around the tag that was found, and that text is marked PCDATA. The program thus knows where the text is and knows where the tags are. The reference does not explicitly disclose judging the physical structure of the document element based on an indentation or a blank line; however, the generation and reduction methods of Shafer demonstrate the analyzing the tags as well as text within the tags. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included an indentation as part of the analysis of text because it would have extended the benefit of the tag extraction process and developed tag list.

**In reference to dependent claim 5, Shafer discloses:**

The program thus knows where the text is and knows where the tags are. The matching tag procedure performs in conjunction with the tag list developed. See column 8, lines 50-65.

**In reference to dependent claim 6, Shafer discloses:**

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A reduction based upon the semantics of SGML wherein, then text is present at the same level of structure, then the structure probably is errant. See column 14, lines 45-50.

**In reference to dependent claim 7**, Shafer discloses:

In carrying out the overall reduction, a single grammar element is acquired and a reduction as elected by the reduction guide is carried out with respect to the grammar element. The next grammar element is accessed and the same procedures are carried out. See column 13, lines 18-25.

**In reference to dependent claim 8**, the rejection of independent claim 1 above is incorporated herein. Shafer does not teach the analysis of document elements based on semantics and excluding one element name from a document type definition based on the judgment results of said physical/semantic structure judging step. However, Messerly discloses a method of information retrieval that reduces the number of identified occurrences for which different senses were intended and in which words bear different relationships to each other. The reference also discloses a rule-based parser for parsing input text segments to be tokenized in order to produce logical forms. See column 2, lines 50-60 and column 5, lines 20-30. Extracting the features of a document and summarizing a document based on document text as disclosed by Messerly would have provided Shafer the benefit of manipulating the extracted document text elements as well as performing physical and semantic analysis on tag elements. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the document type definition generation method of Shafer and included the physical and semantic analysis of Messerly to provide the identification of occurrences within the elements of a structured document.

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**In reference to dependent claim 9 & 10**, the claim recites similar limitations to that of dependent claim 8, and is therefore rejected under similar rationale.

**In reference to dependent claim 11**, Shafer discloses:

The reduction acquires and operates discretely upon each grammar element of the hierarchical tree structure. Then, a determination is made as to whether each such acquired grammar element is combined with a rule of a given form of tree structure. See column 3, lines 32-38. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Shafer to utilize similar techniques of analyzing tags to provide an analysis of a start tag and end tag having the same title for the preparation of generating document type definition based on the information.

**In reference to dependent claim 12-22**, the limitations of these claims are the apparatus for carrying out the method of claims 1-11, and are rejected under the same rationale.

**In reference to independent claim 23**, the limitations of this claim is the computer program product for carrying out the methods of claim 1, and is rejected under the same rationale.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Aoyama et al.	US Patent No. 5,956,726	filed (6/3/96)
Sato et al.	US Patent No. 6,014,680	filed (8/29/96)
Nakamura et al.	US Patent No. 5,842,159	filed (3/28/95)
Motoyama	US Patent No. 6,208,956	filed (11/13/98)

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Arantza Casillas, Jodeba Abaitua, Raquel Martinez, 'DTD-Driven Bilingual Document Generation', 1998, pages 32-38.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Ludwig whose telephone number is 703-305-8043.

The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon can be reached on 703-308-5186. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

ML

April 14, 2003

  
HEATHER R. HERNDON  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100